



Reliability Analysis Center

Knowledge for System Effectiveness

Patrick T. Hetherington
Director





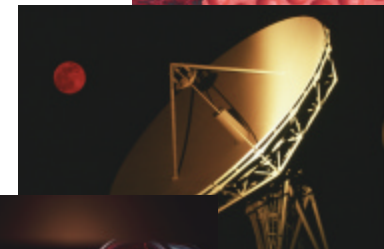
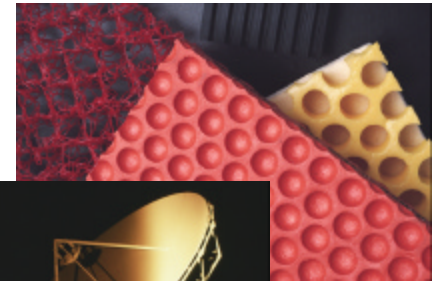
General IAC Mission and Objectives

- ♦ Improve productivity of researchers, engineers, and program managers in the DoD research, development, and acquisition communities
- ♦ Promote standardization within specific technical areas
- ♦ Provide in-depth analysis and support services
- ♦ Create specialized technical information products

IAC Subject Areas

Advanced Materials and Processes
Chemical/Biological Warfare
Chemical Propulsion
Crew Systems Ergonomics
Information Assurance
Infrared
Manufacturing

Modeling and Simulation
Nondestructive Test
Reliability and Maintainability
Shock and Vibration
Software
Survivability/Vulnerability
Weapons Systems Technology





RAC Mission



**Provide Timely, Cost Effective and Proven
Services and Solutions to the DoD and
Commercial Community That Lead to Improved
Acquisition, Sustainment and Readiness Through
a Center of Excellence for R&M Knowledge and
Operational Support**





RAC is an Information Analysis Center (IAC) Chartered to Solve Customer Problems



IAC – formal organization to acquire, digest, analyze, evaluate, synthesize, store, publish and provide advisory and other user services concerning available technical information and engineering data in a clearly defined, specialized field or subject area

Collect

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Process

Analyze

Disseminate

Products

Training

Current
Awareness

Inquiries

Support

- Reliability, Maintainability, Supportability, Quality
- Sustainment, Obsolescence, Modernization
- Full Product/System Life Cycle
- Applications Build Knowledge Base





RAC Sponsorship

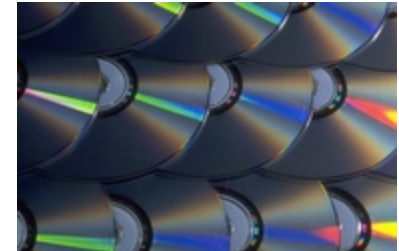
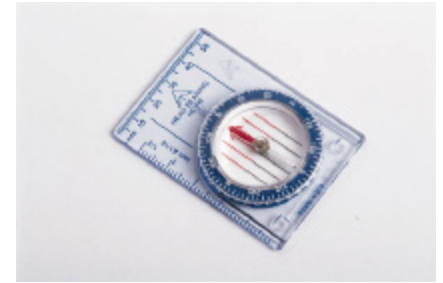
- IAC Program Management
 - Defense Technical Information Center (DTIC)
 - POC Ronald Hale rhale@dtic.mil
- DOD Technical Sponsor
 - OUSD/AT&L/IO/SE
 - POC George Desiderio george.desiderio@osd.mil
- COTR
 - Air Force Research Laboratory
 - POC Richard Hyle hyler@rl.af.mil





What is RAC to You

- A Help Desk
- A Technical and Operational Support Staff
- A Knowledge Portal
- A Community Presence
- A Lessons Learned Repository
- A System's Effectiveness Solution Focal Point
- A Technical Resource
 - Unbiased, Experienced, Independent, Expert
 - Qualified, Knowledgeable, Connected

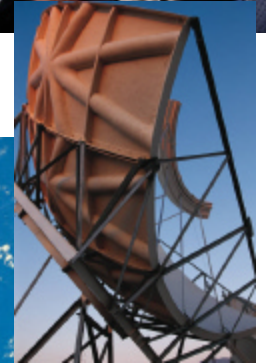
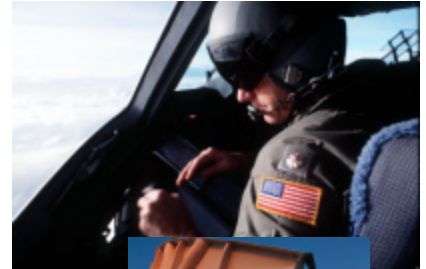




Why RAC

Government Organization - Contractor Staffed Established to:

- **Be an Independent, Unbiased Source of Support to DoD**
- **Provide Real Time World Class Expertise (Standing Task Force)**
- **Take advantage of Solution Reutilization**
- **Take Problems off your Plate**
 - From Concept to Product
 - Leveraging Knowledge Base
- **Be your R&M Extended Staff**



**We're Here, We're Ready, We're Capable, We're
Connected**





Typical RAC Customers (Government)

Air Force

WRALC
AFRL
ESC
SMC
ASC
ACC
SMALC

Navy

NUSC
NAEC
NUWC
SPAWAR
NAVSEA
NAWC
MCLB
NAVAIR

Army

ARL
AMCCOM
AMSAA
Army Corps
of Engineers
TACOM
LABCOM
STRICOM
APG

Other

DoD
OSD
DTIC
DFSC

Other

Government
FAA
CPSC
NASA
USCG
FQI
NIST





Typical RAC Customers (Industrial)



AD Tranz
Anaren
AO Smith
AT&T
Barber Colman
Bell Northern
Bombardier
Cadillac
Cessna
Ciena
ConMed

Corning
Daimier Chrysler
Dell
Dialogic
Dupont
Eaton
EPRI
E-Systems
FMC Ford
General Electric
Harris Semiconductor

Ingersoll-Rand
ITRON
Johnson & Johnson
Kodak
Lennox
Lockheed Martin
Loral
Lucas
Mobil
Navistar
Northrup Grumman
Northwest Airlines

NY Air Brake
NYNEX
PAR Microsystems
Philips Broadband
Pitney Bowes
Plug Power
Raytheon
Saturn
Scientific Atlanta
Siemens
Square D
Tavis
Weldbend





RAC Provides Support Across the R&M Domain

- R&M Scientific and Technical Analysis
- Service Life Extension and Obsolescence Support
- Sustainment Management and Supportability
- Modernization and Reverse Engineering
- R&M Tool Development and Implementation
- Acquisition Support and Guidance
- Education and Training
- Data Collection, Synthesis and Dissemination
- Support Industry and Government Standardization





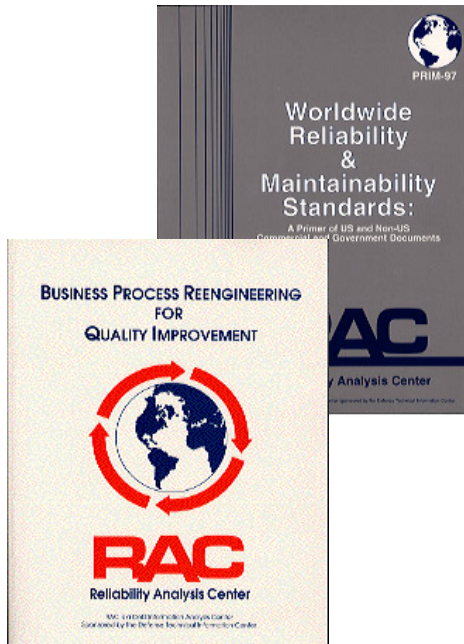
We Collect R&M Data

- Provide Reliability Practitioners with Quantitative Data Necessary to Perform Reliability Engineering Analyses
- Assist/Basis in/for the Development of RAC Products
- Support Sustainment, Prognostics and Implementation
- Respond to Inquiries

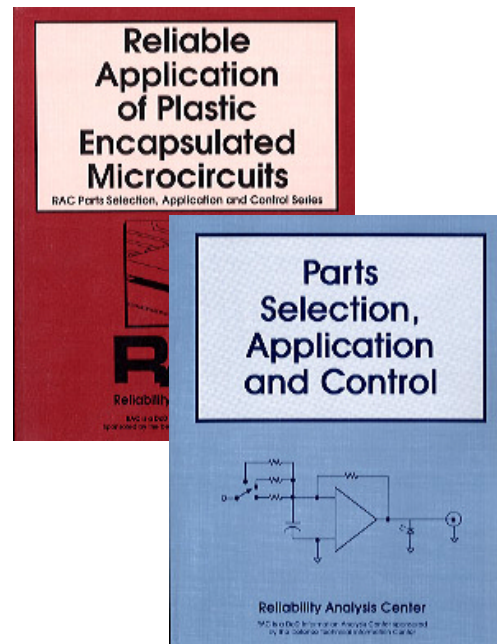




We Publish



Managers
(Appreciation of Issues)



Designers
(Impact of Decisions)



Practitioners
(How to Implement)

Over 60 Products and Tools Available

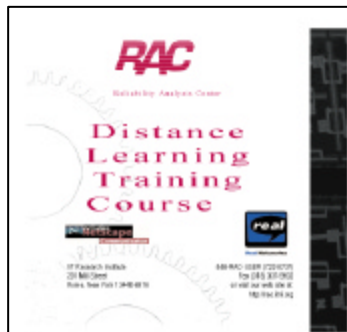




We Develop Tools



Answering User Needs



Distributed Learning



Addressing COTS



Most Comprehensive Reliability Part Data





We Educate

Open Registration Programs

Quarterly, at Rotating Locations
Typically 3 Days of Content

Customer On-Site Presentations
Tailored to Individual Needs
Virtually Any RMQ Topic

500 Students per Year Include:
Managers
Designers
RMQ Specialists



Topics

- Design Reliability
- Reliability Growth
- Accelerated Testing
- Integrated Logistics Management
- Introduction To Systems Engineering
- Lean Sustainment





We Inform

RAC Reliability Analysis Center
Friday - October 18, 2002

Center of Reliability and Maintainability Excellence for Over 30 Years

About RAC	Products & Services	Information Resources	User Help Desk	News & Events
Sponsors Mission User Guide Related IACs	Publications & Tools Consulting Services Training Programs PRISM [®] Software Tool	R&M Library Reliability Data R&M Software Tools Related Web Sites R&M Standards	Ask the Experts R&M Forum Site Search Contact Us Toolbox	Calendar Journal START What's New

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(Click Here)

Information Analysis Center (IAC) Awareness Conference

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<http://rac.iitri.org>

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- RAC Journal
- Free
- Quarterly
- Technical Content (16-24 pgs)

The Journal of the Reliability Analysis Center

Reliability Continued Maintenance: A Success Story for the Engine Regals Process

By George J. Johnson, Captain, USAF
David L. Johnson, Captain, USAF

Introduction

Engine Regals is the process of inspecting, repairing, and overhauling engines. It is a critical part of the engine support process. The Regals process is a complex, multi-step process that involves a large number of personnel and resources. The Regals process is a critical part of the engine support process. The Regals process is a complex, multi-step process that involves a large number of personnel and resources. The Regals process is a critical part of the engine support process. The Regals process is a complex, multi-step process that involves a large number of personnel and resources.

Background and Concept

The Regals process is a critical part of the engine support process. The Regals process is a complex, multi-step process that involves a large number of personnel and resources. The Regals process is a critical part of the engine support process. The Regals process is a complex, multi-step process that involves a large number of personnel and resources.

START Selected Topics in Assurance Related Technologies

Volume 5, Number 2

Cost As An Independent Variable (CAIV)

Introduction

Cost As An Independent Variable (CAIV) is a technique for...

Background and Concept

CAIV is the application of the concept of cost as an independent variable to the design and development process. It is a technique for...

CAIV versus Design to Cost

Design to Cost (DTC) is a technique for... CAIV is a technique for...

Conclusion

CAIV is a technique for... It is a technique for...

- “START” Sheets
- Hot Topics
- Introduction & References
- “Cost as An Independent Variable (CAIV)”
- “Flexible Sustainment”
- “Accelerated Testing”
- “Six-Sigma”





Long-Term Program Support

Acquisition

- Requirements Definition
- Environmental Characterization
- Design Criteria
- R/M Analysis
- Risk Management
- Design Reviews
- Test Programs

Development

- Test Planning/Monitoring
- Failure Tracking/Analysis
- Variability Reduction
- Resource Identification
- Trade-off Analysis

Sustainment

- Maintenance Improvements
- Life Extension
- Parts Obsolescence
- Supportability
- Modernization
- Cost Benefit Analysis
- System Compatibility

- Act as Customer's R/M Expert
- Support Supplier's Programs and Products
- Quick Reaction with Long Term Impact





Why use RAC to Solve your Problems?



Deep Technical Capability

- Chartered R&M Center of Excellence
- More than 60 Experts on Staff
- Unequaled Data/Information Resources
- Strong Capabilities in Related Technologies

Easy Contract Vehicle

- Already "Competed"
- Tasks Start in 2-3 Weeks
- Contract Scope Very Broad



Timely, Cost
Effective Solutions



Objective Results

- Unbiased Perspective
- Not-for-profit Contractor

Improved
Knowledge Base
for Future Customers

Protection of Sensitive/Proprietary Information





Summary

- *If you have an R&M problem;*
- *If you have R&M questions;*
- *If you have an R&M project and don't know where to start;*
- *If you need planning, execution, and assessment support;*

CALL *RAC*



Contacting RAC

<http://rac.iitri.org>

RAC Director
Patrick Hetherington
(315) 339-7084
phetherington@iitri.org

RAC Deputy Director
Ned Criscimagna
301-918-1526
ncriscimagna@iitri.org

RAC COTR
Richard Hyle
(315) 330-4857
hyle@rl.af.mil

